



## Template for Public Safety Power Shutoff (PSPS) Post-Event and Lessons Learned Report

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The California Public Utilities Commission's (CPUC) Safety and Enforcement Division (SED) prepared this template to be used by electric investor-owned utilities for the PSPS post-event and lessons learned report required in Decision (D.) 19-05-042. The source of each reporting requirement is referred to following each section and cited in parentheses. CPUC Decisions cited in this template include Resolution ESRB-8, Decision (D.) 19-05-042, D.20-05-051, D.21-06-014, and D.21-06-034. Additional reporting is also included by SED, pursuant to the authority granted to SED by the CPUC in D.19-05-042 at 108 and Appendix A at A25. Each IOU's post-event report must be sent to the service list for CPUC Rulemaking R18-12-005 and R18-10-007 or their successor proceedings.

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### **Section 1. Executive Summary**

This section provides an overview of the Public Safety Power Shutoff (PSPS) event. It must include, at a minimum:

1. Brief description of the PSPS event starting from the time when the

utility's Emergency Operation Center is activated until service to all customers have been restored. (D.21-06-014, page 286, SED Additional Information.)

2. A table (see Table 1) including the maximum numbers of customers notified and actually de-energized; number of counties de-energized; number of tribes de-energized; number of Medical Baseline customers de-energized; number of transmission and distribution circuits de-energized; damage/hazard count; number of critical facilities and infrastructure de-energized. Hazards are conditions discovered during restoration patrolling or operations that might have caused damages or posed an electrical arcing or ignition risk had PSPS not been executed (D.21-06-034, Appendix A, page A15, SED Additional Information.)

Table 1: PSPS Event Summary

Total customers			MBL customers	Number of counties	Number of tribes	Number of Circuits			Damage/Hazard Count	Critical Facilities and Infrastructure
PSPS Notified	De-energized	Cancelled	De-energized	De-energized	De-energized	Transmission de-energized	Distribution circuits in scope	Distribution circuits de-energized		De-energized

3. A PDF map (see example below) depicting the de-energized area(s) (SED Additional Information.)

## Example of De-energization Footprint Map



## **Section 2. Decision-Making Process**

Reports on the decision-making process must include, at a minimum:

1. A table showing all factors considered in the decision to shut off power for each circuit de-energized, including sustained and gust wind speeds, temperature, humidity, and moisture in the vicinity of the de-energized circuits (Resolution ESRB-8, page 3, SED Additional Information.)
2. Decision criteria and detailed thresholds leading to de-energization including the latest forecasted weather parameters versus actual weather. Also include a PSPS decision-making diagram(s)/flowchart(s) or equivalent along with narrative description (D.19-05-042, Appendix A, page A22, D.21-06-014, page 284, SED Additional Information.)
3. A thorough and detailed description of the quantitative and qualitative factors it considered in calling, sustaining, or curtailing each de-energization event including any fire risk or PSPS risk modeling results and information regarding why the de-energization event was a last resort, and a specification of the factors that led to the conclusion of the de-energization event. (D.20-05-051, Appendix A, page 9, SED Additional Information.)
4. An explanation of how the utility determined that the benefit of de-energization outweighed potential public safety risks, and analysis of the risks of de-energization against not de-energizing. The utility must identify and quantify customer, resident, and the general public risks and harms from de-energization and clearly explain risk models, risk assessment processes, and provide further documentation on how the power disruptions to customers, residents, and the general public is weighed against the benefits of a proactive de-energization (D.19-05-042, Appendix A, page A24, D.21-06-014, page 284, SED Additional Information.)
5. Explanation of alternatives considered and evaluation of each alternative. (D.19-05-042 Appendix A, page A22.)

## **Section 3. De-energized Time, Place, Duration and Customers**

This section must include, at a minimum:

1. The summary of time, place and duration of the event, broken down by

phase if applicable (Resolution ESRB-8 page 3, SED Additional Information.)

2. A zipped geodatabase file that includes PSPS event polygons of de-energized areas. The file should include items that are required in Section 3.3. (SED Additional Information.)
3. A list of circuits de-energized, with the following information for each circuit. This information should be provided in both a PDF and excel spreadsheet (Resolution ESRB-8, page 3, SED Additional Information.)
  - County
  - De-energization date/ time
  - Restoration date/ time
  - “All Clear” declaration date/ time
  - General Order (GO) 95, Rule 21.2-D Zone 1, Tier 2, or Tier 3 classification or non High Fire Threat District
  - Total customers de-energized
  - Residential customers de-energized
  - Commercial/Industrial customers de-energized
  - Medical Baseline (MBL) customers de-energized
  - AFN other than MBL customers de-energized
  - Other Customers
  - Distribution or transmission classification

#### **Section 4. Damage and Hazards to Overhead Facilities**

This section must include, at a minimum:

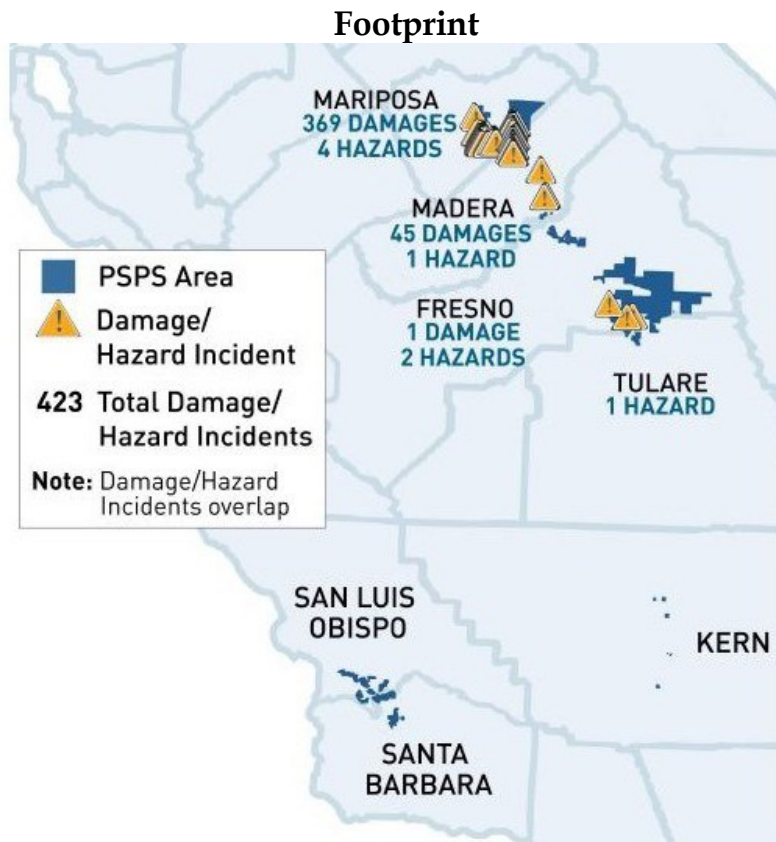
1. Description of all found wind-related damages or hazards to the utility’s overhead facilities in the areas where power is shut off. (Resolution ESRB-8, page 3, SED Additional Information.)
2. A table (see Table 2) showing circuit name and structure identifier (if applicable) for each damage or hazard, County that each damage or hazard is located in, whether the damage or hazard is in a High Fire-Threat District(HFTD) or non-HFTD, Type of damage/hazard of damage. (SED AdditionalInformation.)

Table 2: Damages and Hazards

Damages and hazards found within de-energized areas				
Circuit Name	County	Structure	Zone 1, Tier 2/3 or Non-HFTD	Type and description of damage/hazard

3. A zipped geodatabase file that includes the PSPS event damage and hazard points. The file should include fields that are in Table 2. (SED Additional Information.)
4. A PDF map (see example below) identifying the location of each damage or hazard. (SED Additional Information.)

### Example Map of Damages and Hazards Found within the PSPS



## Section 5. Notifications

This section must include, at a minimum:

1. A description of the notice to public safety partners, local/tribal governments, paratransit agencies that may serve all the known transit- or paratransit-dependent persons that may need access to

a community resource center, multi-family building account holders/building managers in the AFN community, and all customers, including the means by which utilities provide notice to customers of the locations/hours/services available for CRCs, and where to access electricity during the hours the CRC is closed. (Resolution ESRB-8, page 3. D21-06-034, Appendix A, page A2, A9-A10, SED Additional Information.)

2. Notification timeline including prior to de-energization, initiation, restoration and cancellation, if applicable. The timeline should include the required minimum timeline and approximate time notifications were sent. (D.19-05-042, Appendix A, page A8-A9, D.21-06-034, page A11)
3. For those customers where positive or affirmative notification was attempted, use the following template (Table 3) to report the accounting of the customers (which tariff and/or access and functional needs population designation), the number of notification attempts made, the timing of attempts, who made the notification attempt (utility or public safety partner) and the number of customers for whom positive notification was achieved. (D.19-05-042, Appendix A, page A23, SED Additional Information.)

Table 3: Positive Notification

<b>Designation</b>	<b>Total number of customers</b>	<b>Notification attempts made</b>	<b>Timing of attempts</b>	<b>Who made the notification attempt</b>	<b>Successful positive notification</b>
Medical Baseline (MBL)					
MBL behind a master meter					
Etc.					

“Notification attempts made” and “Successful positive notification” must include the unique number of customer counts. When the actual notification attempts made is less than the number of customers that need positive notifications, the utilities must explain the reason. In addition, the utilities must explain the reason of any unsuccessful positive notifications. (SED Additional

Information.)

4. A copy or scripts of all notifications with a list of all languages that each type of notification was provided in, the timing of notifications, the methods of notifications and who made the notifications (the utility or local public safety partners). (D.19-05-042, Appendix A, page A23, SED Additional Information.)
5. If the utility fails to provide notifications according to the minimum timelines set forth in D.19-05-042 and D.21-06-034, using the following template (Table 4) to report a breakdown of the notification failure and an explanation of what caused the failure. (D.21-06-014 page 286, SED Additional Information.)



Table 4: Breakdown of Notification Failure

Notifications sent to	Notification Failure Description	Number of Entities or Customer Accounts	Explanation
Public Safety Partners excluding Critical Facilities and Infrastructure	Entities who did not receive 48-to 72-hour advance notification.		
	Entities who did not receive 1-4-hour imminent notification.		
	Entities who did not receive any notifications before de-energization		
	Entities who were not notified immediately before re-energization		
	Entities who did not receive cancellation notification within two hours of the decision to cancel		
Critical Facilities and Infrastructure	Facilities who did not receive 48-72-hour advance notification.		
	Facilities who did not receive 1-4 hour of imminent notifications.		
	Facilities who did not receive any notifications before de-energization.		
	Facilities who were not notified at de-energization initiation.		
	Facilities who were not notified immediately before re-energization.		
	Facilities who were not notified when re-energization is complete.		
	Facilities who did not receive cancellation notification within two hours of the decision to cancel		
All other affected	Customers who did not receive 24-48-hour advance notifications.		

customers	Customers who did not receive 1-4-hour imminent notifications.		
	Customers who did not receive any notifications before de-energization.		
	Customers who were not notified at de-energization initiation.		
	Customers who were not notified immediately before re-energization.		
	Customers who were not notified when re-energization is complete.		
	Customers who did not receive cancellation notification within two hours of the decision to cancel		

6. Explain how the utility will correct the notification failures. (D.21-06-014, page 286.)
7. Enumerate and explain the cause of any false communications citing the sources of changing data. (D.20-05-051, Appendix A, page 4.)

## **Section 6. Local and State Public Safety Partner Engagement**

This section must include, at minimum:

1. Use the following table (Table 5) to List the organization names of public safety partners including, but not limited to, local governments, tribal representatives, first responders and emergency management , and critical facilities and infrastructure the utility contacted prior to de-energization, the date and time on which they were contacted, and whether the areas affected by the de-energization are classified as Zone 1, Tier 2, or Tier 3 as per the definition in CPUC General Order 95, Rule 21.2-D. (Resolution ESRB-8, page 5, SED Additional Information.)

Table 5: Public Safety Partners contacted

Jurisdiction/Organization	Title	HFTD Tier	Date/Time Contacted
XX County Fire Department			
XX County OES			
XX Tribe			
Etc.			

2. List the names of all entities invited to the utility's Emergency Operations Center for a PSPS event, the method used to make this invitation, and whether a different form of communication was preferred by any entity invited to the utility's emergency operation center. (D.21-06-014, page 289.)
3. A statement verifying the availability to public safety partners of accurate and timely geospatial information, and real time updates to the GIS shapefiles in preparation for an imminent PSPS event and during a PSPS event. (D.21-06-014, page 289.)
4. A description and evaluation of engagement with local and state public safety partners in providing advanced outreach and notification during the PSPS event. (D.19-05-042, Appendix, page A23.)

5. Specific engagement with local communities regarding the notification and support provided to the AFN community. (D.20-05-051, Appendix A, page 8, SED Additional Information.)
6. Provide the following information on backup power (including mobile backup power) with the name and email address of a utility contact for customers for each of the following topics: (D.21-06-014, page 300.)
  - a. Description of the backup generators available for critical facility and infrastructure customers before and during the PSPS.
  - b. The capacity and estimated maximum duration of operation of the backup generators available for critical facility and infrastructure customers before and during the PSPS.
  - c. The total number of backup generators provided to critical facility and infrastructure customer's site immediately before and during the PSPS.
  - d. How the utility deployed this backup generation to the critical facility and infrastructure customer's site.
  - e. An explanation of how the utility prioritized how to distribute available backup generation.
  - f. Identify the critical facility and infrastructure customers that received backup generation.

## **Section 7. Complaints & Claims**

This section must include, at minimum: the number and nature of complaints received as the result of the de-energization event and claims that are filed against the utility because of de-energization. The utility must completely report all the informal and formal complaints, meaning any expression of grief, pain, or dissatisfaction, from various sources, filed either with CPUC or received by the utility as a result of the PSPS event. (Resolution ESRB-8, page 5, D.21-06-014, page 304.)

## **Section 8. Power Restoration**

This section must include, at minimum:

1. A detailed explanation of the steps the utility took to restore power (Resolution ESRB-8 page 5.)
2. The timeline for power restoration, broken down by phase if applicable (D.19-05-042, Appendix A, page A24, SED Additional Information.)
3. For any circuits that require more than 24 hours to restore, the utility shall use the following template (Table 6) to explain why it was unable to restore each circuit within this timeframe, using the format below. (D.20-05-051, Appendix A, page 6.)

Table 6: Circuits requiring more than 24 hours to restore

Circuit Name	Reason the Utility was Unable to Restore the Circuit Within 24 Hours
Circuit	Restoration delayed due to xxxx

## Section 9. Community Resource Centers

This section must include, at minimum:

1. Using the following template (Table 7) to report information including the address of each location during a de-energization event, the location (in a building, a trailer, etc.), the assistance available at each location, the days and hours that it was open, and attendance (i.e., number of visitors) (Resolution ESRB-8, page 5, SED Additional Information.)

Table 7: Community Resource Centers

#	County	Site Name	Address	Operating Hours	Attendance	Site Type	Amenities Provided
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2. Any deviations and explanations from the CRC requirement including operation hours, ADA accessibility, and equipment. (SED Additional Information.)
3. A map identifying the location of each CRC and the de-energized areas (SED Additional Information.)

## Section 10. Mitigations to Reduce Impact

This section must include, at minimum: Mitigation actions and impacts (both

waterfall graph and map) including: sectionalization devices, temporary generation, microgrids, permanent backup generation, transmission switching, covered conductor, and any other grid hardening that mitigated the impact of the event (D.21-06-014, page 285, SED Additional Information.)

## **Section 11. Lessons Learned from this Event**

This section adopts the below format (Table 8) and must include, at a minimum:

Table 8: Lessons Learned

Lessons Learned from PSPS Event		
Issue	Discussion	Resolution

1. Threshold analysis and the results of the utility's examination of whether its thresholds are adequate and correctly applied in the de-energized areas. (D.21-06-014, pages 305-306.)
2. Any lessons learned that will lead to future improvement for the utility (SED Additional Information.)

## **Section 12. Other Relevant Information**

This section must include any other relevant information determined by the utility.

### **Officer Verification**

A Vice-President level officer of the utility must provide a written signed statement under penalty of perjury to attest to the accuracy of the post event and lessons learned report. (SED Additional Information.)

### **Appendix**

This section includes any appendix that utility attaches. Each appendix must include page numbers.

### **Notes:**

1. Any table and appendix with rows exceeding five should also be provided in Excel format as a supplemental document.
2. All Excel spreadsheets must be combined into one file with different

tabs to differentiate the topics.

3. The utility must submit one PSPS post-event report for each event unless approval is given by the Director of SED prior to the due date of the report. All requests for extensions of the due dates or to combine reports must be submitted in writing and include the service list for CPUC Rulemaking 18-12-005 or a successor proceeding.
4. All the submitted documentation including the appendices must be legible.
5. The utility may cross-reference to sections and subsections of the report where a topic has already been addressed.
6. The utility may add additional tables and use its own table numbering to report complete PSPS information.